

IBM WebSphere Portal Tools Update

- Where the newest tools fit
- Considerations for selecting tools

In this deck we'll provide guidance on selecting from the available Portal tools:

- Script Portlet
- Digital Data Connector (DDC) and Social Rendering
- Web Experience Factory (WEF)
- Rational Application Developer (RAD)
- IBM Forms (Forms Experience Builder or FEB)

We'll start with a quick, prescriptive guide to choosing tools, and after that take you through a few slides on each tool and its features and benefits



Some useful criteria for comparing tools

Here are some useful criteria for evaluating and comparing tools:

1. **Skills:** What are the skills you have or want to grow in your team, and how do they match the primary skills used with the tool?
2. **Typical use cases:** What are your typical use case requirements, and how do they match the “sweet spot” of the tool?
3. **Deployment:** Would you prefer to deploy applications by putting JEE code on the server, or by updating a content repository or database?

Prescription for selecting a tool

- If you are building primarily data entry applications, FEB is a clear first choice
- If you are primarily listing, formatting, or displaying information, consider DDC, with its business user control and WCM-based rendering
- If you are building applications that are more general than those above, consider using Script Portlet, since it leverages widely available skills (HTML/JS/CSS) and it has all the benefits of WCM management and deployment (in context preview, projects, approval workflow, etc.)
- If you are most comfortable with JEE deployment or if you want to leverage additional features such as data access connectors, refer to the information on the benefits and features of WEF and RAD to find the best choice for your needs

Comparison of tools

Tool	Primary skills involved	Typical use cases	Primary application code deployment
Script Portlet	JS/HTML/CSS JS libraries and frameworks	Any type of application UI, using data from REST/JSON services Client-side applications	WCM
DDC	WCM, HTML/CSS/JS	Lists and details views of external data – social, commerce, search, other data sources – with some update functions Server-side rendering	WCM
WEF	WEF and Java, HTML/CSS/JS	Any type of application UI, with server-side data access support provided by WEF builders Client-side or server-side applications or combination of both	Server WAR
RAD	Java and JEE, HTML/CSS/JS Optionally, UI frameworks such as JSF and Spring	Any type of application UI, with server-side data access support Client-side or server-side applications or combination of both	Server WAR
FEB	Some HTML/JS/CSS	Data entry forms	DB2



A short walk-through of the tools

Script Portlet

Digital Data Connector (DDC) and Social Rendering

Web Experience Factory (WEF)

Rational Application Developer (RAD)

IBM Forms (Forms Experience Builder or FEB)



Script Portlet Build JavaScript-based portlets using widely-available skills and libraries, in the cloud or on premises with no code deployment

Application HTML/CSS/JS managed in WCM

JavaScript libraries and frameworks of your choice



Script Portlet Editor

script portlet content

Last modified Dec 21, 2013 12:41:54 PM GMT 05:30 by wpsadmin | Created by wpsadmin

```

1 <title id="Description">jQuery Chart Sample</title>
2 <link rel="stylesheet" href="http://www.jquerywidgets.com/jquery-widgets-documentation/pkg/jquerywidgets/css" type="text/css" />
3 <body style="background:white">
4 <div id="chartContainer" style="width:600px; height: 400px"/>

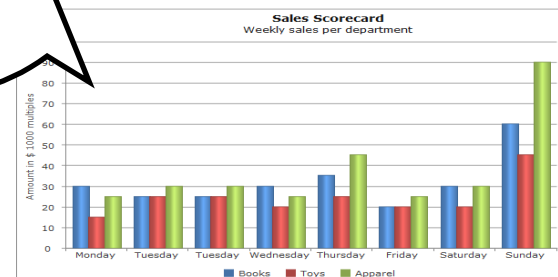
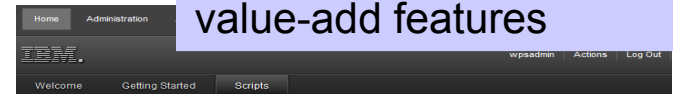
```

```

1
2
3
4 $(document).ready(function () {
5
6     // prepare chart data
7     var sampleData = [
8         { Day:'Monday', Books:30, Toys:15, Apparels: 25},
9         { Day:'Tuesday', Books:25, Toys:25, Apparels: 30},
10        { Day:'Wednesday', Books:30, Toys:20, Apparels: 25},
11        { Day:'Thursday', Books:35, Toys:25, Apparels: 45},
12        { Day:'Friday', Books:20, Toys:20, Apparels: 25},
13    ];

```

Rich portlet applications with support for Portal value-add features



Script Portlet approach

- All the application code – HTML, JS, CSS – is stored and managed in WCM
- From a browser you can work in the Script Portlet Editor, with syntax highlighting and auto-indent
- Applications can be initially developed using your tool of choice, then imported into Script Portlet
- Data access is done with Ajax/REST services using JSON data
 - These services can come from any provider, whether external via Portal's Ajax proxy or from WEF or other provider
- Portal's key value-add features are available
 - Inter-portlet communications, portlet preferences, responsive and adaptive design, Public Render Parameters, etc.



Key benefits of the Script Portlet approach

- You can build portlets using skills you can more easily hire (JS/HTML/CSS, jQuery, etc.)
- Line of Business is less dependent on central IT - a small team of script programmers can make new portlets and customizations quickly and easily
- You can build portlets without deploying any new code on the server
 - Accessing a cloud server from a browser you can create a new portlet in minutes, without installing any tools, for example by copy/paste of JS and HTML snippets
- All the features of WCM can be used for managing applications
 - Projects and workflow can be used for approval by business and/or IT before applications go live
 - All coding changes can be scoped to the same project as other changes to web content or portal-managed content
 - You can create libraries of JavaScript, CSS, data, or markup, and link to them from within the WCM UI



Typical use cases

- Any type of application UI
- Forms, views, charts, etc., etc.
- Single-page applications
- Any JS libraries and frameworks can be used
- Data is accessed with REST/JSON services built with other tools or external
- Client-side applications

To Do List

What needs to be done?

- ✓ Wash the car
- ✓ Buy groceries
- ✓ Feed the dog

2 items left All Active Completed Clear completed (1)

Double-click to edit a todo

Sentiment Analysis - Competitive

Category	Target	Actual
ACME	4000	1233

Banking Transactions Table

Select account: My Checking

Show 10 entries

Type	Date	Amount	M
ATM	1/31/2014	-300.00	A
ATM	1/8/2014	-300.00	A
BRANCH	12/18/2013	465.10	A
DEPOSIT	3/14/2014	1234.00	Demo
DEPOSIT	3/14/2014	321.00	Demo
DEPOSIT	3/14/2014	153.00	
DEPOSIT	3/13/2014	300.00	
DEPOSIT	3/13/2014	150.00	
DEPOSIT	3/13/2014	333.00	Demo
DEPOSIT	2/23/2014	1950.00	Direct Deposit Semi Monthly Payroll

1 to 10 of 41 entries

Home Loan Interest

loan = 300k 300,000

rate = 8% 0.08

months = 12 * 30 360

monthly interest 0.0066666667

monthly payment 2,201.29

total payments 792,465.74

interest payments 492,465.74

principal payments 300,000.00

Digital Data Connect or UDDI WCM and WCM design components to render any external data, with little-to-no Java coding or deployment

IBM Connections

WebSphere Commerce /Sterling Commerce

Kenexa

CMIS

Omnifind/Search

BPM (task list)

Custom Feed/Anything

Presentation Template Options

Presentation Markup:

Import Export Insert a Tag Insert Element Tags Insert a Link Insert an Image

```
[Plugin:ListRenderingContext extension-id="ibm.portal.plr.xml" action="getListProperty" key="title"]</h2>
```

List Presentation Markup

Use HTML to define how list results are presented to your site visitors, including a header, footer, and separator.

Header:

Import Export Insert a Tag Insert a Link Insert an Image

```
<h2>[Plugin:ListRenderingContext action="getListProperty" key="title"]</h2>
```

Result design:

Import Export Insert a Tag Insert a Link Insert an Image

The contributor email of the current item is [AttributeResource attribute=...

Open Edit Form

Libraries > Portal Site > Content > Content Root > DDC > RSS > RSS Feed

RSS Feed

Status - Published | Last modified Today 2:31:23 PM GMT+02:00 by wpadmin | Created by wpadmin

Save and Close Read Preview Apply Authoring Template More Close

Content Properties

*Name: RSS Feed

Display title: RSS Feed

Description: Copy this item to render individual RSS feeds by filling in the "Source URL" value.

Source URL

Source URL: http://newsoffice.mit.edu/rss/topic/computers

List Appearance

Component: Select Component

RSS Feeds / List Appearances / RSS Feed

markup

query

REST based update operations



The DDC approach

- Use IBM Web Content Manager (WCM) design components to render data being served from external systems
- Provide a public plug-point to allow integration of all kinds of data
- Use WCM content items to describe what data to include and what design component to use to render the data
- Support dynamic context overwrites of source and filter attributes using public render parameters
- Make it easy to integrate remote XML data: No custom Java coding
 - Instead, use DDC list rendering profiles to transform external data into lists that can be rendered using WCM presentation templates
- Support update operations through WCM-generated user interfaces



Key benefits of the DDC approach

- WCM Designers have full control over list presentation
→ Resulting lists can fit nicely into the visual design of customer site
- No coding skills required for consuming & rendering external data
- Display any data on any device, with a consistent look managed using WCM
- Clean separation of concerns:
 - **Page Editors** use inline editing to: customize list definitions (i.e. what data to select, how to filter, how to sort) and to associate the appropriate styling by selecting it from a list of available list designs created by the Site Designers
 - **Site Designers** create the look and feel (markup and CSS styling) for the lists
- List presentations and designs support workflow, projects, preview, versioning, syndication
- Generic and shared caching and data retrieval infrastructure
- Can be further extended by developers
- No code deployment on the application server in many cases
 - DDC solutions often consist only of WCM artifacts (HTML/CSS/JS, WCM tags...)
 - Deployment can be done using WCM syndication



Typical use cases

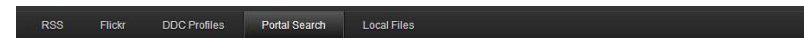
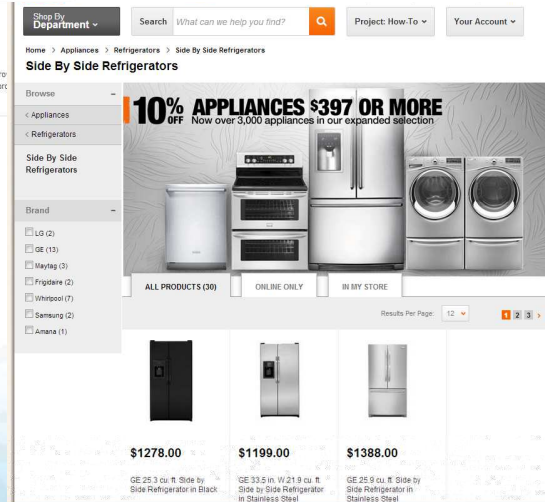
- Lists and details display of external data using a WCM-driven look and feel
- Social, commerce, search, CMIS documents, feeds, or any other data sources
- Server-side rendering
- REST-based CRUD functions



Betty Zechman
 Marketing & Merchandising, Worldwide
 Office:
 Mobile number:
 Fax number: 1-301-555-9456
 Office number:
 Emails: bzzechman@zetaabank.com
 Tags: session2
 Assistant Name:
 Export vCard Invite to My Network

Recent Blog Posts by Betty Zechman

Kenexa's Creative Team Named Merit Winner in 2012 In-HOWse Design Awards
 Updated by Betty Zechman on 3/12/14 11:01 AM
 WAYNE, Pa. (Oct. 11, 2012) – Kenexa (NYSE: KXNA), a global pro business solutions for human resources, today announced that pr by its in-house creative team were chosen as two



Search Results

Search term: Kenexa , Scope: com.ibm.lotus.search.MANAGEDWEB

Kenexa Discussions
 Apr 15, 2014 | Relevance: 100.0

Kenexa Community Members
 Apr 15, 2014 | Relevance: 95.94407653808594
 Summary: The list of members of the Kenexa Com

Kenexa Sub Communities
 Apr 15, 2014 | Relevance: 92.22268876757812

Community Details
 relevance: 89.71458435058594

Topic Details
 relevance: 87.37289428710938

MIT News - Computer science and technology

MIT News is dedicated to communicating to the media and the public the news and achievements of the students, faculty, staff and the greater MIT community.

CSAIL researchers develop new ways to streamline, simplify 3-D printing
 Jul 24, 2013

New research to be presented at the 2013 SIGGRAPH computer graphics conference could transform field of 3-D printing.

A faster Internet — designed by computers?
 Jul 19, 2013

Computer-designed algorithms for controlling network congestion yield transmission rates two to three times as high as those designed by humans.

Writing programs using ordinary language
 Jul 11, 2013

Systems that can convert written specifications into working code in a few narrow cases could be generalized to other tasks.

Researchers build an all-optical transistor
 Jul 5, 2013

An optical switch that can be turned on by a single photon could point toward new designs for both classical and quantum computers.

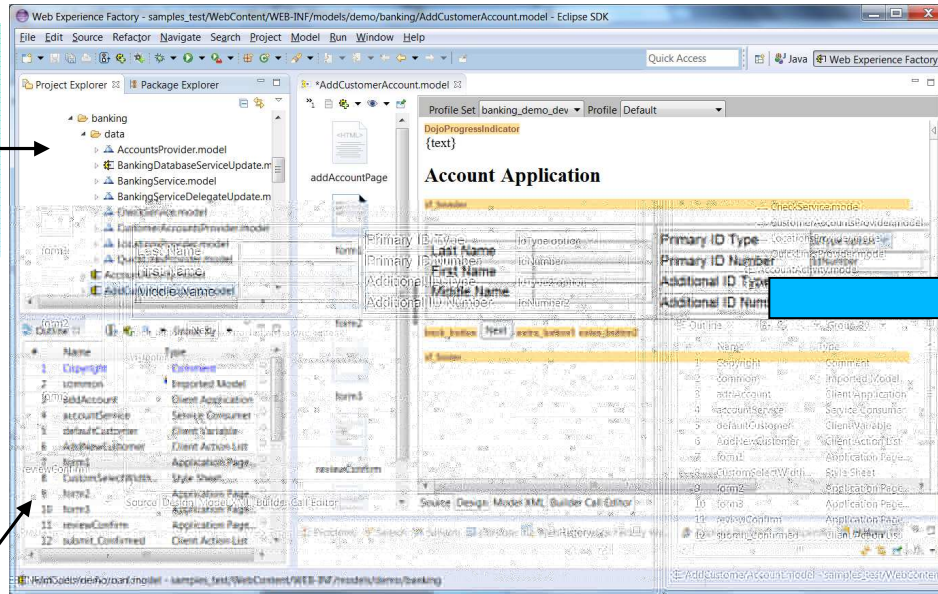
Securing the cloud
 Jun 10, 2013

A new algorithm solves a major problem with homomorphic encryption, which would let Web servers process data without decrypting it.

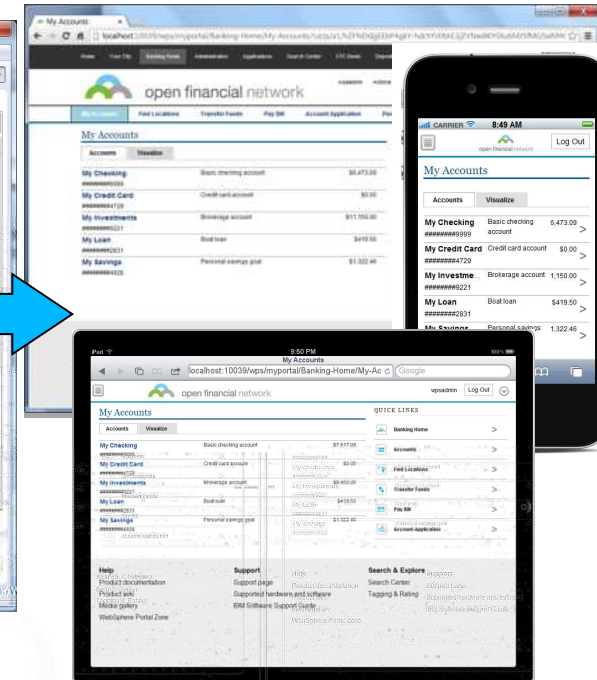
Web Experience Factory Use model-based code generation tools to quickly build portlets and generate multiple variations automatically

Data Service Provider Model
Data Access and Transformation Builders

User Interface (Consumer) Model
UI & mobile builders



Generated application code with multiple variations



The WEF approach

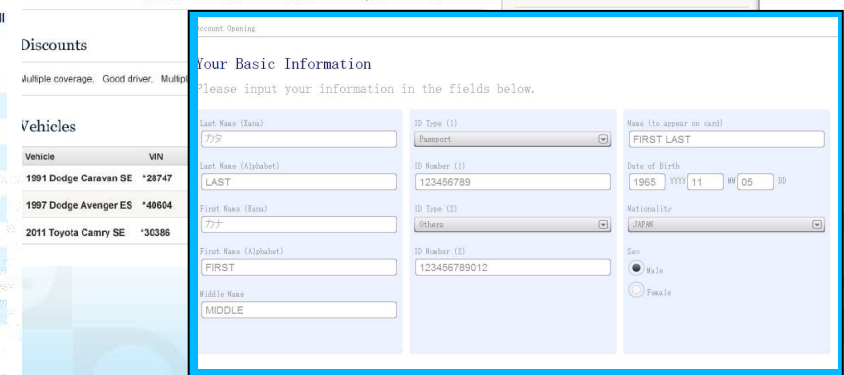
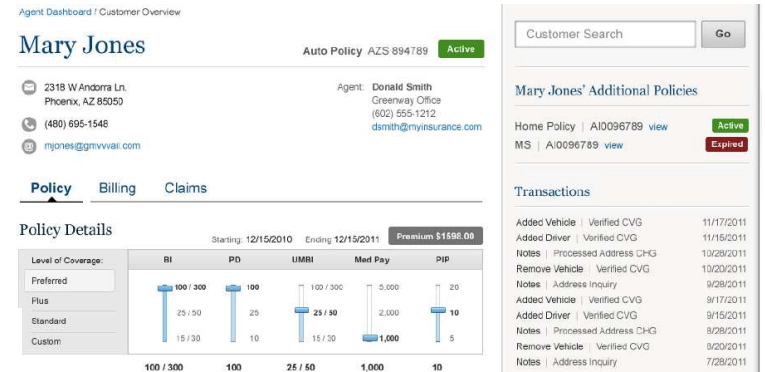
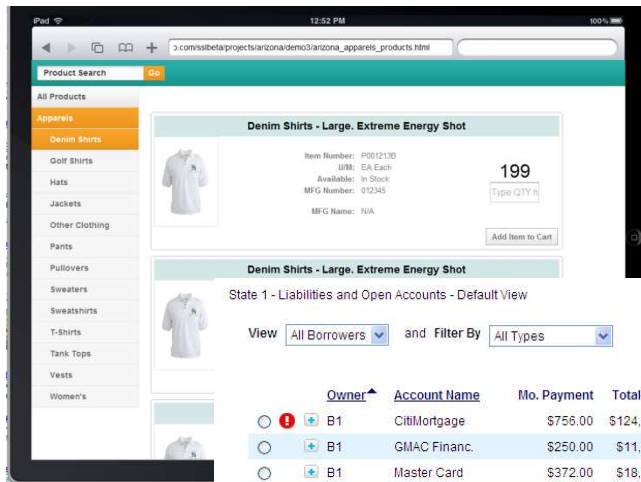
- Instead of hand-coding the application, developers configure builders in a model, and the builders generate the application code
- A large set of builders is available, for all sorts of tasks
 - High-level UI patterns, data access and transformation, mobile/responsive UI, rich data field behavior, Worklight support, etc.
- The Eclipse-based IDE includes a WYSIWYG view of the generated application
- Dynamic Profiling can be used to generate multiple variations from a single model
 - For different roles, device classes, geographies, runtime customization, and more
- Developers can publish directly to local or remote server

Key benefits of the WEF approach

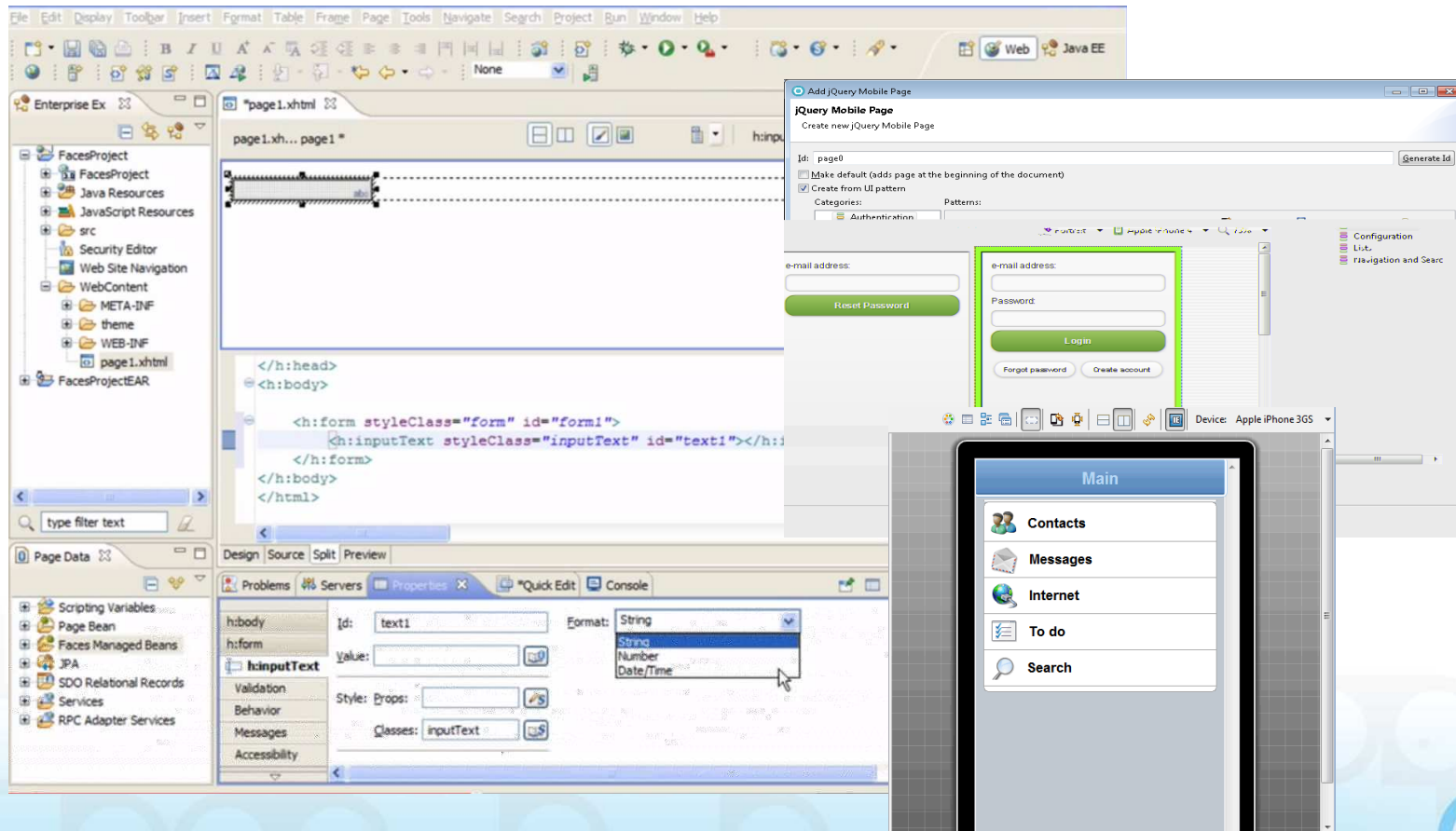
- Very rapid development of common patterns
 - Quickly generate fully-functional applications based on a service or back end data source
- No coding or learning curve for using complex technologies
- Easy integration with back end data and services using builders
- Full customization using builders and by integrating custom code and UI designs
- Flexibility and runtime variability using Dynamic Profiling
- Automatic enforcement of team development standards and practices
- Easily use a combination of server-side and client-side code

Typical use cases

- Any type of application UI, with server-side data access support
- Forms, views, charts, multi-page applications, etc., etc.
- Client-side or server-side applications or combination of both



Rational Application Developer (RAD) Java-based portlets in an Eclipse-based IDE with a comprehensive tool set featuring wizards and Drag/Drop



The RAD approach

- Provides complete tools for the Java developer
 - All the Java/JEE/web tools you need, in a single IDE
 - Tools for UI
 - Tools for REST/Web services
- Wizards, specialized editors, and drag/drop tools are available
- WYSIWYG page editing and mobile browser simulator let you visualize what you're building
- Frameworks such as JSF and Spring can be used
- Developers can publish directly to local or remote server



Key benefits of the RAD approach

- All-in-one IDE gives developers everything they need
- Valuable open source frameworks such as JSF and Spring can be used
- A combination of server-side and client-side code can be used
- Test servers are included
- The Eclipse-based environment with a focus on portal programming is intuitive for many developers
- Specialized tools like Rich Page Editor and Mobile Browser Simulator for mobile development are available
- Code generation using wizards enhances productivity
- Tools support easy integration with JavaScript libraries such as jQuery Mobile or Dojo and with 3rd party JSF component libraries



Typical use cases

- Any type of application UI, with server-side data access support
- Forms, views, charts, multi-page applications, etc., etc.
- Client-side or server-side applications or combination of both

The image displays three distinct web application interfaces, illustrating typical use cases for IBM Rational software.

1. Market Watch Dashboard: This interface features a 'Markets Overview' tab and a 'Market Watch' section. It includes a line chart for 'JASSIN' stock, showing a price drop from approximately \$14.5 to \$11.5. Below the chart is a table of market data:

Exchange	Last Index	Change
SAUAGA	8516.12	+1.56
JASSIN	612.21	-2.91
MANANE	915.45	+3.33
MANAGB	2415.37	+2.25
MEGKUC	2398.19	-2.93

2. Customer Service Workbench: This interface is titled 'Customer Service Workbench' and includes a search bar and a table of customer records. The table has columns for Account Name, Contact Name, Status, Last Contact Date, Next Contact Date, and Next Contact Mode. It lists several accounts, including 'United Super Corp' and 'United Super Corp - Service'.

3. Campaign Management Search Results: This interface shows 'Search Results' for a campaign. It includes a table with columns for Quotes/Policies/Leads, Invitation #, Mail Date, Last Name, First Name, Residential Address, City, State/Province, Phone, and Sales Rep. The results show several entries for 'CEI, SEPTEMBER', 'CUTLER, JAY', 'DENT, HARVEY', 'DEPLOYMENT, SEPTEMBER', and 'DITKA, MIKE'.

Form Experience Builder FE Build complete data entry form solutions in minutes right from the browser without any coding

The screenshot shows the IBM Forms Manage interface for an 'Event Registration' form. The left sidebar contains a 'Palette' with various form elements like Section, Text, Single Line Entry, Multi-Line Entry, Number, Currency, Date, Time, Email, Page Navigation, Button, Image, Drop Down, Select One, and Select Many. The main workspace displays the 'Event Registration' form with a title, a thank-you message, and a 'Personal Information' section with fields for First name, Last name, and Email. A 'Workshop Selection' section is also visible. An 'Edit Single Line Entry Properties' dialog box is open, showing the 'Basic' tab with options to set the item as 'hidden' or 'visible' based on conditions. The dialog includes a table for 'Rule conditions' with columns for 'Where', 'Operation', and 'Value'.

Three example forms built using Form Experience Builder are shown:

- IT Satisfaction Survey:** A survey form with a title, a question about job satisfaction, and a table of rating options (Very satisfied, Somewhat satisfied, Neither satisfied nor dissatisfied, Somewhat dissatisfied, Very dissatisfied, I do not use / I am not familiar). It includes a 'Feedback' section with a 'Comment' field and a 'Survey' button.
- Feedback:** A form for providing feedback on a recent event, with a 'Comment' field and a 'Survey' button.
- Benefits Enrollment Form:** A form for registering for benefits such as health and dental plans, with a title, a description, and a form for 'Employee Information' including fields for First name, Last name, Date of birth, Address, City, Province/state, Postal/zip code, Phone (work), Phone (personal), Email, Social insurance number, Sex, and Marital status.

The F E B approach

- Forms are built in a browser with simple WYSIWYG design tools
- The complete application definition is stored in a database
- Applications can be extended and enhanced with JS/HTML/CSS
- Forms data can be stored in a database, or you can use the service architecture to integrate with other applications

Key benefits of the FEB approach

- Non-technical users can build sophisticated data entry form applications
- You can make changes and fine tune form experiences in minutes
-

Typical use cases

- All kinds of data entry forms
 - Survey, enrollment, feedback, self-service, request, application, registration
- Reports and charts of results

IBM Forms Employee Survey

Employee Survey

Use this form to suggest ways the we could serve you better.

How would you rate your experience for the categories below:

Accessibility: (Select one)

Responsiveness: (Select one)

Product Knowledge: (Select one)

Overall Experience: (Select one)

What comments or suggestions do you have?

Select the most appropriate topic:

(Select one)

If complete satisfaction is important to us, would you:

☐ Yes please ☐ No Thanks

☐ Share my comment.

IBM Forms Country Gardener Invoice

Customer Work Order & Invoice

No job is too big or small for the country gardener

The Country Gardener

* Name: Order #: Description:

Marty Lechleider WO283860 Blah Blah

* Phone: * Email:

222-222-2222 fred@mail.com

Prepare Getting Here Diet Record

testtwo

Food Allergy Diet Record

This Diet Record is for the patient and all fields should be completed about the patient.

Parents, please note: If you have more than one child for which you wish to complete a Diet Record, you must submit the Diet Record for the first child before beginning the next one.

Initial Patient Info

Patient Name: Today's Date:

Birth Date: Age:

13

* Form Filled out by:

Mother

Is your child on formula?

No

IBM Forms GWS New Hire Onboarding Checklist

Greenwell Sports

Instructions: complete each form starting with Basic Employee Information

Form

Basic Employee Information

Safety Policy

Business Conduct Guidelines

Direct Deposit

Benefits Enrollment

New Hire Checklist

Work Details

Landscaping

☐ Design

☐ Grading

☒ Soil Prep.

☐ Planting

☐ Walkways

☐ Rock Wall

Lawn Care

Sales Information

Address: Quotation: Sales Info:

* Address:

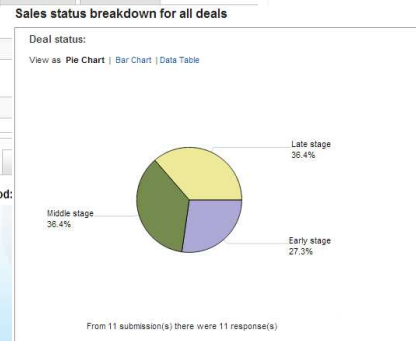
3 Stone

* City:

Beverly

Labor Costs

Payment Method:



Final comments and links to resources

Some final comments

- This deck presents a simplified view, and in many places used words such as “primary” or “typical”
- When you include all the things you can do with these tools, the distinctions can seem blurred
- All the tools can do things outside of their most common use cases
- For example:
 - With WEF, RAD, or Eclipse, you can have a small server-based shell and build most of the application with JavaScript and JavaScript libraries and frameworks
 - The WEF Script Application builder automates this pattern
 - While DDC is most often used for rendering, the technology also supports some CRUD applications using REST services



For more information

- Script Portlet
 - [Script Portlet on Portal Catalog](#)
- Digital Data Connector and Social Rendering
 - [Digital Data Connector documentation](#)
 - Blog with slides: [IBM Digital Data Connector for WebSphere Portal Now Available](#)
- Web Experience Factory
 - <http://www-10.lotus.com/ldd/pfwiki.nsf>
- Rational Application Developer Portal Tools
 - [RAD Portal Tools wiki](#)
- Forms Experience Builder
 - <http://www-10.lotus.com/ldd/lfwiki.nsf/>

